

## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PO Box 1450 Alexasotra, Virginia 22313-1450 www.repto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,428	06/24/2003	Bo Shen	200208570-1	4318
7590 (68202008 HEWLETT-PACKARD DEVELOPMENT COMPANY Intellectual Property Administration			EXAMINER	
			FINDLEY, CHRISTOPHER G	
P.O. Box 2724 Fort Collins, C			ART UNIT	PAPER NUMBER
			2621	
			MAIL DATE	DELIVERY MODE
			08/20/2008	DADED

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

# BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/603,428 Filing Date: June 24, 2003 Appellant(s): SHEN, BO

> John P. Wagner (Reg. No. 35,398) For Appellant

#### **EXAMINER'S ANSWER**

This is in response to the appeal brief filed 4/30/2008 appealing from the Office action mailed 10/31/2007.

Art Unit: 2621

## (1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

#### (2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## (3) Status of Claims

The statement of the status of claims contained in the brief is correct.

## (4) Status of Amendments After Final

No amendment after final has been filed.

## (5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

## (6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

#### (7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

## (8) Evidence Relied Upon

6,999,512 B2	Yoo et al.	02-2006
6,404,814 B1	Apostolopoulos et al.	06-2002
6,647,061 B1	Panusopone et al.	11-2003

## (9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

#### Claim Rejections - 35 USC § 101

 Claims 1-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Art Unit: 2621

The invention as claimed in claims 1-27 does not produce a useful, concrete, and tangible result. In order to produce a useful, concrete, and tangible result, an output step is required.

Independent claim 10 recites "A computer useable medium stored thereon a computer program directed to cause a computer to execute a method comprising...", which fails to meet the statutory requirement set forth in the Interim Guidelines, Annex IV (a) and (b):

(a) Functional Descriptive Material: "Data Structures" Representing Descriptive Material

Per Se or Computer Programs Representing Computer Listings Per Se

Data structures <u>not claimed as embodied in computer-readable media</u> are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.

The program has to be embodied in a computer readable medium. Claim 10 fails to recite this aspect.

#### (b) Nonfunctional Descriptive Material

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35

U.S.C. § 101. Certain types of descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture or composition of matter.

The computer program as claimed is not properly associated with the operation. It is possible that the computer program may be an unrelated sub-routine or a simple "commence" instruction, which then causes the computer to execute the operation that could be self-resident on the computer, and not encoded on the medium. The Examiner suggests that the computer program be more directly associated with the operation.

Claim 10 should recite "A computer readable medium stored thereon a computer program directed to steps for causing a computer to execute the method comprising..."

Claims 11-18 are dependent upon claim 10.

Application/Control Number: 10/603.428 Page 4

Art Unit: 2621

#### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made

Claims 1-5, 9-14, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over
 Yoo et al. (US 6999512 B2) in view of Apostolopoulos et al. (US 6404814 B1).

Re claim 1, Yoo discloses a method for servicing streaming media comprising; receiving said streaming media (Yoo; Fig. 4, MPEG-1 BITSTREAM input); and performing a multi-stage service on said streaming media (Yoo: Fig. 4, data is parsed in multiple stages: sequence header, GOP header, picture header, etc.). Yoo does not specifically disclose determining an allocation of available processing and memory resources and selecting intermediate results according to the available processing and memory resources; and caching an intermediate result from one of the stages of said multi-stage process. However, Apostolopoulos discloses a transcoding method in which buffer data is managed to prevent overflow or underflow (Apostolopoulos; column 8, lines 32-36) and processing resources available are taken into account (Apostolopoulos: column 31, lines 39-43) while performing the transcoding operation. Furthermore, Apostolopoulos discloses that an output buffer may be included for storing entropy coded blocks into a predictively coded block-based picture signal that is compliant with a standard decoder (Apostolopoulos: column 23, lines 36-47). Since both Yoo and Apostolopoulos disclose transcoders, which perform transcoding operations between traditional MPEG-1/MPEG-2 bitstreams and more contemporary MPEG-4 bitstreams, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the memory and processing management of Apostolopoulos with the transcoding operation of Yoo in order to save processing resources by operating in the coded domain (Apostolopoulos: column 4, lines 43-46). The method of Yoo, now implemented in conjunction with the method of Apostolopoulos, has all of the features of claim 1.

Art Unit: 2621

Re claim 2, the method of Yoo, now implemented in conjunction with the method of Apostolopoulos, discloses performing a computing-intensive service on the streaming media (Yoo: Fig.5; column 9. lines 38-49; quantization is computing-intensive), as in the claim.

Re claim 3, the method of Yoo, now implemented in conjunction with the method of Apostolopoulos, discloses everything claimed, as applied above (see claims 1 and 2). In addition, Yoo discloses that the processing resource is a transcoder (Yoo: Abstract section). Yoo does not specifically disclose that the group of resources includes a first cache, and a second cache. However, Apostolopoulos discloses a transcoder, wherein the transcoder can additionally include an output buffer (Apostolopoulos: column 23, lines 36-47, an output buffer may generate a feedback signal for controlling quantization step size) and an input buffer constraint may also be used for determining a target bit-rate (Apostolopoulos: column 23, lines 36-47). Therefore, the processing capabilities of either a first cache (output buffer in Apostolpoulos) or a second cache (input buffer in Apostolopoulos) may be used to control the data bit-rate, and ,consequently, the data stored in the buffers. Since both Yoo and Apostolopoulos disclose transcoders, which perform transcoding operations between traditional MPEG-1/MPEG-2 bitstreams and more contemporary MPEG-4 bitstreams, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the bit-rate/memory management of Apostolpoulos with the transcoding operation of Yoo in order to ensure that the bit-rate complies with a predetermined constraint, thereby preventing buffer overflow or underflow (Apostolopoulos: column 8, lines 32-36). The method of Yoo, now implemented in conjunction with the method of Apostolopoulos, has all of the features of claim 3.

Re claim 4, the method of Yoo, now implemented in conjunction with the method of Apostolopoulos, discloses that the media service comprises transcoding functions (Yoo: Abstract section), as in the claim.

Re claim 5, the method of Yoo, now implemented in conjunction with the method of Apostolopoulos, discloses that the media service result is a final transcoding result (Yoo: Fig. 4; column 6, lines 4-15 (the final result of the transcoder is a transcoded bitstream)), as in the claim.

Art Unit: 2621

Re claim 9, the combined method of Yoo and Apostolopoulos discloses a majority of the features of claim 9, as discussed above in claims 1 and 4. Additionally, Yoo discloses that transcoding functions are performed by resources selected from the group that consist of bit rate controller (Yoo: Fig. 4, block 420 "bit\_rate") and parser (Yoo: Fig. 4, blocks 402, 404, 406, 408, 410, and 412), but Yoo does not specifically disclose that the group includes a motion vector generator. However, Apostolopoulos discloses a transcoder that includes a motion vector generator (Apostolopoulos: column 8, line 65, through column 9, line 11). Since both Yoo and Apostolopoulos disclose transcoders, which perform transcoding operations between traditional MPEG-1/MPEG-2 bitstreams and more contemporary MPEG-4 bitstreams, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the memory and processing management of Apostolopoulos with the transcoding operation of Yoo in order to save processing resources by selecting the lowest cost motion vectors and optimizing coding efficiency (Apostolopoulos: column 36, lines 56-67). The method of Yoo, now implemented in conjunction with the method of Apostolopoulos, has all of the features of claim 1.

Claim 10 describes the corresponding computer readable medium thereon stored a computer program directed to steps for executing the method of claim 1 and, therefore, has been analyzed and rejected with respect to claim 1 above.

Claim 11 has been analyzed and rejected with respect to claim 2 above.

Claim 12 has been analyzed and rejected with respect to claim 3 above.

Claim 13 has been analyzed and rejected with respect to claim 4 above.

Claim 14 has been analyzed and rejected with respect to claim 5 above.

Claim 19 describes the corresponding apparatus for implementing the method of claim 1 and, therefore, has been analyzed and rejected with respect to claim 1 above.

Claim 20 has been analyzed and rejected with respect to claim 2 above.

Art Unit: 2621

Claim 21 has been analyzed and rejected with respect to claim 3 above.

Re claim 22, the method of Yoo, now implemented in conjunction with the method of Apostolopoulos, discloses that the intermediate transcoding result is selected from any of the respective stages of said multistage service (Yoo: Fig. 4, Blocks 402, 406, 410, and 412 each provide intermediate data before the MPEG-1 bitstream is coded as an MPEG-4 bitstream and, therefore, intermediate data is available from a plurality of stages), as in the claim.

Re claim 23, the method of Yoo, now implemented in conjunction with the method of Apostolopoulos, discloses a majority of the features of claim 23, as discussed above in claim 19. Yoo does not specifically disclose that the result is selected to optimize the balance of processing and memory resources used in providing said service. However, Apostolopoulos discloses a transcoder, wherein motion vectors with the smallest cost are used, where the cost may relate to processing constraints (MSE, MAE, etc.) or memory constraints (the number of bits required to code the MC-residual) (Apostolopoulos: column 36, lines 1-7 and 56-67). Since both Yoo and Apostolopoulos disclose transcoders, which perform transcoding operations between traditional MPEG-1/MPEG-2 bitstreams and more contemporary MPEG-4 bitstreams, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the bit-rate/memory management of Apostolopoulos with the transcoding operation of Yoo in order to ensure that the bit-rate complies with a predetermined constraint, thereby preventing buffer overflow or underflow (Apostolopoulos: column 8, lines 32-36). The method of Yoo, now implemented in conjunction with the method of Apostolopoulos, has all of the features of claim 23.

 Claims 6-8, 15-18, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. (US 6999512 B2) and Apostolopoulos et al. (US 6404814 B1) as applied to claims 1-5, 10-14, and 19-23 above, and further in view of Panusopone et al. (US 6647061 B1).

Re claim 6, the method of Yoo, now implemented in conjunction with the method of Apostolopoulos, discloses a majority of the features of claim 6 as discussed above concerning claims 1-5, and additionally that transcoding functions are selected from the group consisting of bit rate reduction (Yoo: Fig. 4, block 420 "bit\_rate") and resolution reduction (Yoo: Fig. 4, block 420 "vop\_width" and

Art Unit: 2621

"vop\_height"). However, the combined method of Yoo and Apostolopoulos does not specifically disclose frame rate reduction as a transcoding function. Panusopone does disclose a transcoding apparatus, which performs frame rate reduction (Panusopone: column 19, lines 9-13). Since Yoo, Apostolopoulos, and Panusopone all relate to performing transcoding between traditional MPEG-1/MPEG-2 bitstreams and more contemporary MPEG-4 bitstreams, one of ordinary skill in the art at the time of the invention would have found it obvious to combine their teachings to reduce the complexity of the transcoding system (Panusopone: column 3, lines 35-37) by determining similarities between the MPEG-1/MPEG-2 and MPEG-4 data (Panusopone: column 2, lines 64-67), thus needing to only partially decompress the input bitstream and re-compress the bitstream into a different output format (Panusopone: column 3, lines 47-55). The combined method of Yoo and Apostolopoulos, now implemented in the apparatus of Panusopone, has all of the features of claim 6.

Re claim 7, the combined method of Yoo and Apostolopoulos, now implemented in the apparatus of Panusopone, discloses a majority of the features of claim 7, as discussed above in claim 1. Yoo does not specifically disclose that caching (buffering) comprises caching (buffering) intermediate transcoding results of an output stream of said streaming media provided a target bit rate of said output stream of said streaming media is greater than a data caching (buffering) rate of said streaming media. However, Apostolopoulos discloses a transcoding method, wherein a desired bit rate (i.e., target bit rate) is determined (Apostolopoulos: column 31, lines 39-43) and the bit-rate is varied according to buffer constraints (Apostolopoulos: column 23, lines 42-47), ensuring that the buffer does not underflow (Apostolopoulos: column 8, lines 32-36). Since Yoo, Apostolopoulos, and Panusopone all relate to performing transcoding between traditional MPEG-1/MPEG-2 bitstreams and more contemporary MPEG-4 bitstreams, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the bit-rate/memory management of Apostolopoulos with the transcoding operation of Yoo in order to ensure that the bit-rate complies with a predetermined constraint, thereby preventing buffer overflow or underflow (Apostolopoulos: column 8, lines 32-36), which conventionally occurs when the rate of the data leaving the buffer (target bit rate) exceeds the rate of data entering the buffer

Art Unit: 2621

(buffering/caching rate)), as in the claim. The method of Yoo, now implemented in conjunction with the method of Apostolopoulos, has all of the features of claim 7.

Re claim 8, the combined method of Yoo and Apostolopoulos, now implemented in the apparatus of Panusopone, discloses a majority of the features of claim 8, as discussed above in claims 1 and 7. Additionally, Yoo discloses that intermediate transcoding results comprise meta data that is selected from the group consisting of block (Yoo: Fig. 4, block 412), macroblock (Yoo: Fig. 4, block 410), picture (Yoo: Fig. 4, block 406) and sequence (Yoo: Fig. 4, block 402). Yoo does not specifically disclose that the meta data group includes pixel data. However, Panusopone discloses a transcoder, wherein processing operations are performed on a pixel level (Panusopone: column 3, line 66, through column 4, line 4). Since Yoo, Apostolopoulos, and Panusopone all relate to performing transcoding between traditional MPEG-1/MPEG-2 bitstreams and more contemporary MPEG-4 bitstreams, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the pixel averaging of Panusopone with the transcoding operations of Yoo and Apostolopoulos in order to provide a system capable of generating scaled coded images (Panusopone: column 4, lines 44-50). The method of Yoo, now implemented in conjunction with the method of Apostolopoulos, has all of the features of claim 8.

Claim 16 has been analyzed and rejected with respect to claim 7 above.

Claim 17 has been analyzed and rejected with respect to claim 8 above.

Claim 18 has been analyzed and rejected with respect to claim 9 above.

Claim 24 has been analyzed and rejected with respect to claim 6 above.

Claim 25 has been analyzed and rejected with respect to claim 7 above.

Claim 26 has been analyzed and rejected with respect to claim 8 above.

Claim 27 has been analyzed and rejected with respect to claim 8 above.

Claim 15 has been analyzed and rejected with respect to claim 6 above.

Application/Control Number: 10/603,428 Page 10

Art Unit: 2621

#### (10) Response to Argument

1. Regarding the rejection of claims 1-27 under 35 U.S.C. §101, the Applicant contends that an output step is not required in order for the recited claims to produce a useful, concrete, and tangible result. However, the Examiner respectfully disagrees. The claims, as presently presented, describe a manipulation of data, wherein no access is provided to the resulting data, thereby failing to comply with the criteria for a tangible result outlined by the Interim Guidelines, page 21, lines 14-20 (section IV.C.2.b(2)), which states that "the claim must set forth a practical application of that §101 judicial exception to produce a real-world result."

- 2. Regarding the rejection of claims 10-18 under 35 U.S.C. §101, the Applicant contends that the presently presented claim language of claim 10, reciting a "computer useable medium," is equivalent to a computer readable medium, and, therefore, overcomes the Examiners rejection of claims 10-18 under 35 U.S.C. §101. However, the Examiner respectfully disagrees. Use of the language "computer useable medium" indicates a broader category of elements than that of a "computer readable medium," wherein a computer useable medium could include media that are "useable" (but not necessarily "readable") by a computer, such as an electromagnetic carrier signal with no physical element, which is not statutory according to the Interim Guidelines, page 36, lines 11-14 (Annex II, section A.v.).
- 3. Regarding the rejection of claims 1-5, 9-14, and 19-23 under 35 U.S.C. §103 as being unpatentable over Yoo in view of Apostolopoulos, the Applicant contends that Apostolopoulos does not teach or suggest "caching an intermediate result from one of the stages of said multi-stage process," as recited in independent claims 1, 10, and 19. However, the Examiner respectfully disagrees.
  Apostolopoulos discloses, with reference to Fig. 6C, that the transcoder 320 can additionally include an output buffer (not shown in the figure) that organizes the entropy coded blocks into a predictively coded block-based picture signal that is compliant with a standard decoder, such as an MPEG-2 decoder (Apostolopoulos: column 23, lines 36-42). This passage indicates that entropy coded blocks are written to the output buffer and subsequently organized into a coded block-based picture signal. Therefore, the

Art Unit: 2621

data written to the output buffer is intermediate data, since it has not yet been organized into its final

4. Further regarding the rejection of claims 1-5, 9-14, and 19-23 under 35 U.S.C. §103 as being unpatentable over Yoo in view of Apostolopoulos, the Applicant contends that the Examiner relies upon a combination of embodiments, wherein the embodiments each contain mutually exclusive elements that teach away from each other. However, the Examiner respectfully disagrees. The Examiner cited Apostolopoulos as disclosing that Fig. 6C may include an output buffer, which can generate a feedback signal for controlling quantizing applied by the partial encoder so that the bit rate of the predictively-coded block-based picture signal complies with a pre-determined bit-rate requirement or a standard input buffer constraint (Apostolopoulos: column 23, lines 42-47). The Examiner also cited column 8, lines 32-36 of Apostolopoulos, referring to Fig. 3A, in order to re-iterate the functionality of the output buffer (i.e., feedback from the output buffer controlling the quantizer).

Apostolopoulos indicates that the partial encoder 326 of Fig. 6C is structured similarly to the block-based encoder 100 shown in Fig. 3A (Apostolopoulos: column 23, lines 14-16). Thus, one of ordinary skill in the art at the time of the invention would have found it obvious that the partial encoder 326 of Fig. 6C is related to block-based encoder 100 of Fig. 3A, and, therefore, the partial encoder 326 of Fig. 6C is designed as an improvement upon the block-based encoder 100 of Fig. 3A. As such, the partial encoder 326 of Fig. 6C does not perform motion estimation for most of the blocks of the current picture (Apostolopoulos: column 23, lines 29-31), but rather the partial encoder 326 of Fig. 6C uses a motion vector derived from the motion information included in the blocks' respective entries in the visibility and coding table 325 (Apostolopoulos: column 23, lines 22-28), thereby using substantially fewer processing resources than the block based encoder 100 of Fig. 3A (Apostolopoulos: column 23, lines 17-18).

Although the two embodiments differ in their respective methods of determining motion vector data, both the block-based encoder 100 of Fig. 3A (Apostolopoulos: column 9, lines 38-42) and the partial encoder 326 of Fig. 6C (Apostolopoulos: column 23, lines 1-6) generate predictively coded block-based picture signals, meaning the output buffers disclosed with reference to both Fig. 3A (Apostolopoulos:

Art Unit: 2621

column 8, lines 32-36 and column 9, lines 38-42) and Fig. 6C (Apostolopoulos: column 23, lines 36-47) effectively perform the same function of receiving predictively coded blocks and generating a feedback signal to control quantization parameters. Therefore, these elements do not teach away from each other.

5. Also regarding the rejection of claims 1-5, 9-14, and 19-23 under 35 U.S.C. §103 as being unpatentable over Yoo in view of Apostolopoulos, the Applicant contends that Apostolopoulos does not suggest or provide motivation for modifying Yoo. However, the Examiner respectfully disagrees. Both Yoo and Apostolopoulos disclose parsing syntax descriptive header data from picture data and processing said syntax descriptive data separately from the picture data, using the syntax descriptive data to control the decoding of the picture data.

In Yoo, Fig. 4 illustrates inputting a bitstream and parsing a sequence header (Yoo: Fig. 4, block 402), parsing a GOP header (Yoo: Fig. 4, block 404), parsing a picture header (Yoo: Fig. 4, block 406). parsing a slice header (Yoo: Fig. 4, block 408), and parsing a MB header (Yoo: Fig. 4, block 410) before partially decoding macroblock picture data (Yoo: Fig. 4, block 412). Yoo also shows that the header data is processed (Yoo: Fig. 4, blocks 420, 422, and 426) into transcoded header data (Yoo: Fig. 4, blocks 430, 432, and 434) separately from the macroblock picture data (Yoo; Fig. 4, blocks 428 and 436). Similarly, Apostolopoulos discloses in Fig. 6B that the input picture signal is demultiplexed into coding parameters CP, decoded scene descriptors DSD, and partially decoded object descriptors PDOD (Apostolopoulos: column 4, line 60-column 5, line 1 and column 26, lines 48-55). Apostolopoulos discloses that a partially-encoded block-based picture signal is generated from the partially-decoded object descriptors in response to the scene descriptor (Apostolopoulos: column 4, lines 1-4), and a frame of the predictively coded block-based picture signal representing the current picture is generated by predictively coding the partially-coded block-based picture signal to a uniform coding state in response to the coding information (Apostolopoulos: column 4, lines 4-8), meaning the partially decoded object descriptors PDOD correspond to macroblock picture data and the coding parameters CP and decoded scene descriptors DSD correspond to syntax descriptive header data. Furthermore, both Yoo (Yoo: column 6, lines 7-9) and Apostolopoulos (Apostolopoulos: column 26, lines 2-5) disclose processing the picture data in the DCT domain.

Art Unit: 2621

Apostolopoulos additionally states that only the predictively coded object based picture signal portions that represent objects that are actually visible or that are used to predict visible objects in later-coded pictures are decoded (Apostolopoulos: column 19, lines 42-46) in order to reduce the amount of processing resources required (Apostolopoulos: column 19, lines 38-41). Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the selective partial decoding of Apostolopoulos with the transcoding method described by Yoo in order to save processing resources (Apostolopoulos: column 4, lines 46-52, processing resources saved by generating motion vectors from motion information contained in the visibility coding table; column 19, lines 18-26 and 38-46, processing resources saved by selectively decoding only necessary objects), thereby allowing for the benefit of an affordable system capable of efficient processing (Apostolopoulos: column 4, lines 52-55).

6. Regarding the rejection of claims 6-8, 15-18, and 24-27 under 35 U.S.C. §103 as being unpatentable over Yoo in view of Apostolopoulos, and further in view of Panusopone, the Applicant contends that Panusopone does not suggest or provide modivation for modifying Yoo and/or Apostolopoulos. However, the Examiner respectfully disagrees. As noted in the preceding rebuttal, both Yoo and Apostolopoulos disclose parsing syntax descriptive header data from picture data and processing said syntax descriptive data separately from the picture data, using the syntax descriptive data to control the decoding of the picture data. Panusopone also discloses recovering header information of the input bitstream; providing corresponding header information in a second, different video coding format; partially decompressing the input bitstream to provide partially decompressed data; and re-compressing the partially decompressed data in accordance with the header information in the second format to provide the output bitstream (Panusopone: column 3, lines 47-55).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, motivation is found in the knowledge

Art Unit: 2621

possessed by one of ordinary skill in the art. Since Yoo, Apostolopoulos, and Panusopone all disclose the same principle of separating header data from picture data and using the parsed header data to control coding manipulation of the picture data, one of ordinary skill in the art at the time of the invention would have found it obvious to combine the frame rate conversion and pixel level processing of Panusopone with the coding methods of Yoo and/or Apostolopoulos in order to provide a system capable of meeting target constraints (i.e., frame rate, picture size, bit rate, etc.), allowing for optimization of picture quality versus available processor resources.

#### (11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Christopher Findley/

Conferees:

/Marsha D. Banks-Harold/

Supervisory Patent Examiner, Art Unit 2621

/Mehrdad Dastouri/

Supervisory Patent Examiner, Art Unit 2621